Barem - test de antrenament nr. 9

Clasa a V-a

1. **3 puncte**

$a = 2^{4n+1} \cdot 3^{2n+1} - 2^{4n} \cdot 3^{2n} = 2^{4n} \cdot 3^{2n} \cdot 5 = 144^n \cdot 5$.....1p

$b = 5^n \cdot 13^2 - 5^{n+2} = 5^n \cdot 2^4 \cdot 3^2 = 5^n \cdot 144$.....1p

$n = 0 \Rightarrow a < b;\ n = 1 \Rightarrow a = b;\ n \geq 2 \Rightarrow a > b$.....1p

2. **3 puncte**

$100a + 10b + 2 + 100b + 30 + a + 400 + 10a + b = 1098$.....1p

$111(a + b) = 666 \Rightarrow a + b = 6$.....1p

$a + b \vdots 3 \Rightarrow \overline{ab} \vdots 3$.....1p

3. **3 puncte**

$a = \text{nr. persoane}, b = \text{nr. autoturisme}$

$5(b - 1) = a$.....1p

$3b = a - 5$.....1p

$a = 20\ ,\ b = 5$.....1p